

OIB - HU-25C Guardian 10/05/15 Science Report

Aircraft:

[HU-25A Guardian #525](#) ([See full schedule](#))

Date:

Monday, October 5, 2015

Mission:

OIB

Mission Location:

Thule, Greenland

Mission Summary:

Mission: Falcon Sea Ice Central (priority: high)

This mission is a near-repeat of the eastern 'bunny ear' of the Zigzag West flight last flown in spring 2015. We intended to replace the eastern line with a near-contemporaneous CryoSat-2 groundtrack, but none occurred within our operating hours so we instead conducted an exact repeat of our spring 2015 CryoSat-2 line. Finally we modified the westernmost line to overfly a segment of a SIMPL flight from their August 2015 campaign.

Weather improved considerably today, with clear skies prevailing all across northwest Greenland. Our sea ice targets farther to the north had also improved considerably, although our morning satellite images still showed considerable low cloudiness across the Lincoln Sea. However our weather models also indicated the presence of steady low-level offshore winds from Greenland's north coast, and this drying air mass could reasonably be expected to dissipate some of the clouds in the Lincoln Sea. This indeed turned out to be the case - the conditions we encountered were better than the earlier satellite imagery indicated. We still encountered low clouds at several points along the sea ice transect route, but we estimate that they only obscured 15% of the line from our science instruments, most of that along the northernmost sector.

All instruments performed well today, from 34,000' MSL for the entire science portion of the flight. The sun was slightly below the horizon at the sea ice surface for much of the science line, but DMS appeared to capture useable imagery despite these poor photographic conditions.

We conducted a ramp pass at 10,000' MSL.

Data volumes:

DMS: 12.0 Gb

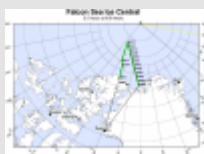
Narrow Swath ATM: 19 Gb

FLIR: 2.0 Gb

total data collection time: 3.3 hrs

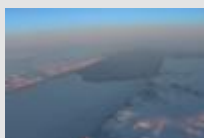
Images:

Map of Falcon Sea Ice Central



[Read more](#)

Petermann Glacier's remnant ice shelf



[Read more](#)

Polar sunrise



[Read more](#)

Submitted by:

John Sonntag on 10/05/15

Related Flight Report:

HU-25C Guardian 10/05/15

Flight Number:

OIB2015 Arctic Sea Ice Central

Payload Configuration:

ATM & DMS

Nav Data Collected:

No

Total Flight Time:

3.6 hours

Submitted by:

Luci Crittenden on 10/05/15

Flight Segments:

From:	BGTL	To:	BGTL
Start:	10/05/15 11:01 Z	Finish:	10/05/15 14:35 Z
Flight Time:	3.6 hours		
Log Number:	16F002	PI:	John Woods
Funding Source:	Thomas Wagner - NASA - SMD - ESD Cryosphere & International Polar Year		
Purpose of Flight:	Science		
Comments:	After being on the ground for a few days due to weather conditions and no weekend flying in Thule, OIB completed the Sea Ice Central Mission this morning. Afternoon data flight already launched.		

Flight Hour Summary:

	15F005	16F002
Flight Hours Approved in SOFRS	100	
Flight Hours Previously Approved		67.4
Total Used	32.6	65.3
Total Remaining		2.1

16F002 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
10/05/15	OIB2015 Arctic Sea Ice Central	Science	3.6	3.6	63.8
10/05/15	OIB2015 Arctic Sea Ice East	Science	3.8	7.4	60
10/06/15	OIB2015 Arctic Ice-Sat2 North	Science	4	11.4	56
10/07/15	OIB2015 Arctic Transit Thule to Kangerlussuaq	Transit	2	13.4	54
10/08/15	OIB2015 Arctic Southwest Coastal A	Science	3.8	17.2	50.2
10/08/15	OIB2015 Arctic Thomas-Jakobshavn 01	Science	3.7	20.9	46.5
10/09/15	OIB2015 Arctic Umanaq B	Science	3.9	24.8	42.6
10/13/15	OIB2015 Arctic Jakobshavn Eqip Store	Science	2.9	27.7	39.7

10/13/15	OIB2015 Arctic Southeast Coastal A	Science	3.6	31.3	36.1
10/18/15	OIB2015 Arctic Southeast Coastal B	Science	4.1	35.4	32
10/19/15	OIB2015 Arctic Helheim-Kangerdlugussuaq	Science	3.7	39.1	28.3
10/19/15	OIB2015 Arctic Helheim-Kangerdlugussuaq Gap B	Science	3.9	43	24.4
10/20/15	OIB2015 Arctic Jakobshavn Mop-Up	Science	3.7	46.7	20.7
10/20/15	OIB2015 Arctic Southwest Coastal B	Science	3.7	50.4	17
10/21/15	OIB2015 Arctic Southwest Coastal C	Science	3.4	53.8	13.6
10/21/15	OIB2015 Arctic K-EGIG-Summit	Science	3.7	57.5	9.9
10/22/15	OIB2015 Arctic Mopup South	Science	2	59.5	7.9
10/22/15	OIB2015 Arctic Ferry BGSF-CYYR	Ferry	2.2	61.7	5.7
10/23/15	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	3.3	65	2.4
10/23/15	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	0.3	65.3	2.1

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Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

15F005 Flight Reports					
Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining

09/15/15	OIB #1	Check	2.7	2.7	97.3
09/20/15	OIB #2, 3, 4	Ferry	2.7	5.4	94.6
09/21/15	OIB #2, 3, 4	Ferry	2.3	7.7	92.3
09/21/15	OIB #2, 3, 4	Ferry	2	9.7	90.3
09/23/15	OIB2015 Arctic North Central Gap 02	Science	3.9	13.6	86.4
09/24/15	OIB2015 Arctic Northwest Coastal A	Science	3.7	17.3	82.7
09/25/15	OIB2015 Arctic Northwest Coastal B	Science	3.8	21.1	78.9
09/28/15	OIB2015 Arctic Sea Ice West	Science	3.7	24.8	75.2
09/30/15	OIB2015 Arctic North Central Gap 01	Science	3.9	28.7	71.3
09/30/15	OIB2015 Arctic Zachariae-79N	Science	3.9	32.6	67.4